

Flight Path to Profitability: Country-Driven Analysis of Booking Behaviors and Route Performance

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Contents

1	Executive Summary
2	Study Objectives
3	Methodology
4	Data Overview
5	Overall Booking Trends
6	Section 1: Booking Patterns Analysis by Country
7	Section 2: Top Route Performance Analysis

Executive Summary

KEY FINDINGS:

- **Conversion rate disparities:** China demonstrates exceptional performance compared to Australia's critically low 5% conversion rate, despite Australia representing the largest market (36% of bookings). Malaysia's routes performance were consistent across all major routes. Top routes from South Korea show alarming failure rates with three routes at 0% conversion despite substantial booking volumes.
- **Distinct planning horizons:** South Korean travelers book furthest in advance, while Malaysian travelers show the highest proportion of last-minute bookings.
- **Service adoption patterns:** Both Australian and Malaysian travelers heavily prioritize extra baggage, while Chinese travelers show minimal interest in seat selection and meals.
- **Group size variations:** 69% of Australian bookings are for solo travelers, while Asian markets predominantly book for pairs.
- **Strategic destination importance:** Bali, Indonesia (DPS) appears prominently across multiple source countries' top routes, indicating its strategic importance in the network.
- **Stay duration patterns:** Asian markets overwhelmingly prefer short stays (<1 week) while Australian travelers show greater diversity in trip duration.

RECOMMENDATIONS:

Market specific conversion optimization strategy

- Australia: Create a dedicated task force to address the critically low 5% conversion for this largest market. Apply Malaysian booking flow elements to the Australian customer journey, with particular focus on solo traveler experience and longer-stay packages. Implement exit surveys to identify specific abandonment reasons.
- South Korea: Identify why three major routes have 0% conversion. Develop tailored content emphasizing advance booking benefits and pair-traveler incentives aligned with their early booking behavior.

Destination centric product strategy

- Develop market-specific Bali packages reflecting distinct stay durations (short-stay bundles for Asian markets vs. flexible longer-stay options for Australians) and group compositions (solo vs. pair configurations).

Study Objectives

GEOGRAPHIC MARKET ANALYSIS

To identify and quantify country specific booking behaviors and preferences across the top five source markets, enabling the development of tailored marketing approaches and service offerings that address the unique characteristics of each geographic segment.

STRATEGIC ROUTE PERFORMANCE ANALYSIS

To examine performance patterns across top-performing routes for each key source country, identifying the specific factors (lead time, service preferences, booking channels) that influence conversion rates on these routes and how they differ across markets.

Methodology

Data source

Public airline customer holiday booking dataset obtained from Kaggle (Kaggle.com)

About the dataset

This dataset provides comprehensive information about customers' preferences and behaviors related to airline holiday bookings. With detailed attributes covering various aspects of the booking process.

Analysis approach

Data Quality:

- Complete data (no missing values) for all variables except booking origins variable contains some "(not set)" values. Minimal impact, affected <0.5% of the dataset.

Data Limitation:

- All insights presented are based on data from August 2023. While market conditions may have evolved in the intervening two-year period, the behavioral patterns identified remain valuable for strategic planning.

Variable categorization:

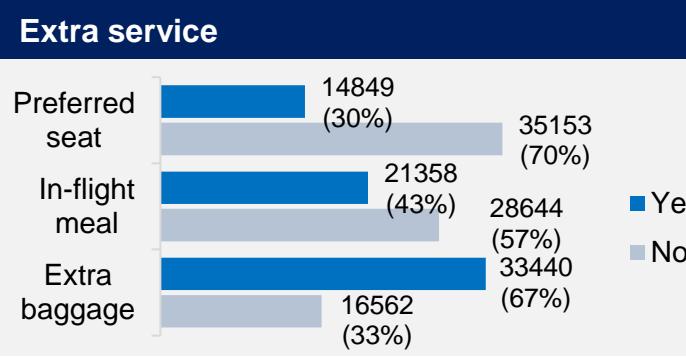
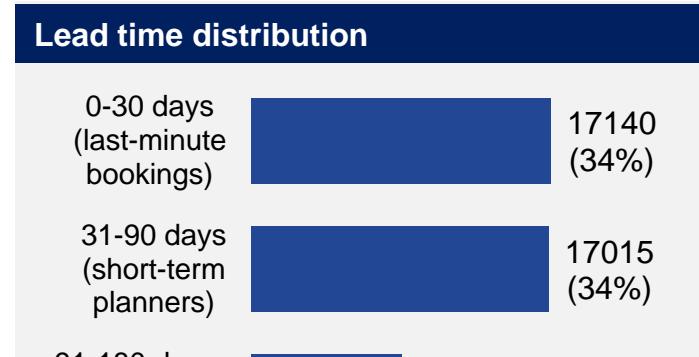
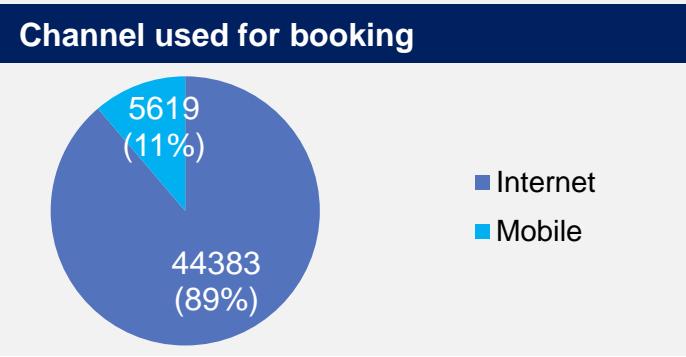
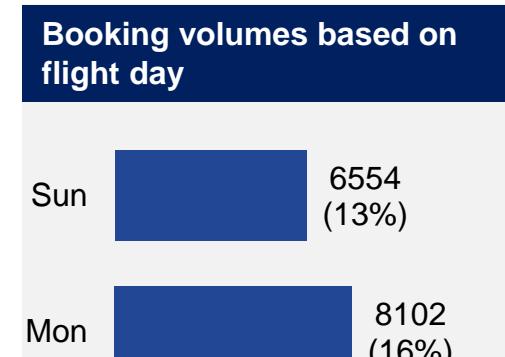
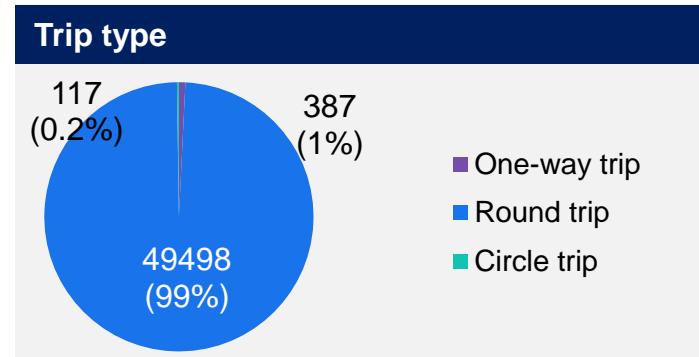
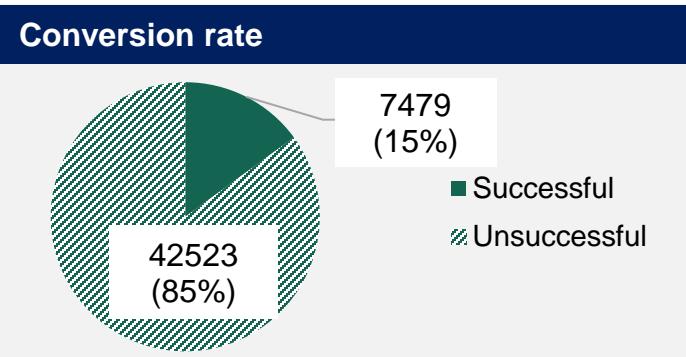
- Lead time (duration between booking and travel dates) and length of stay were categorized into meaningful time intervals, with descriptive labels assigned to each range to facilitate pattern analysis.

Data Overview

Available data points:

Booking characteristics	Flight details	Customer preferences	Target variable
<ul style="list-style-type: none">Number of passengers per bookingHow customer reached website (channel)Trip type (one-way/round trip/circle trip)Lead time (booking to travel duration)Booking source country	<ul style="list-style-type: none">Flight hourDay of weekFlight routeFlight duration	<ul style="list-style-type: none">Extra baggage request (Yes/No)Meal request (Yes/No)Preferred seat request (Yes/No)Holiday stay duration	<ul style="list-style-type: none">Holiday booking success (Yes/No)

Overall Booking Trends



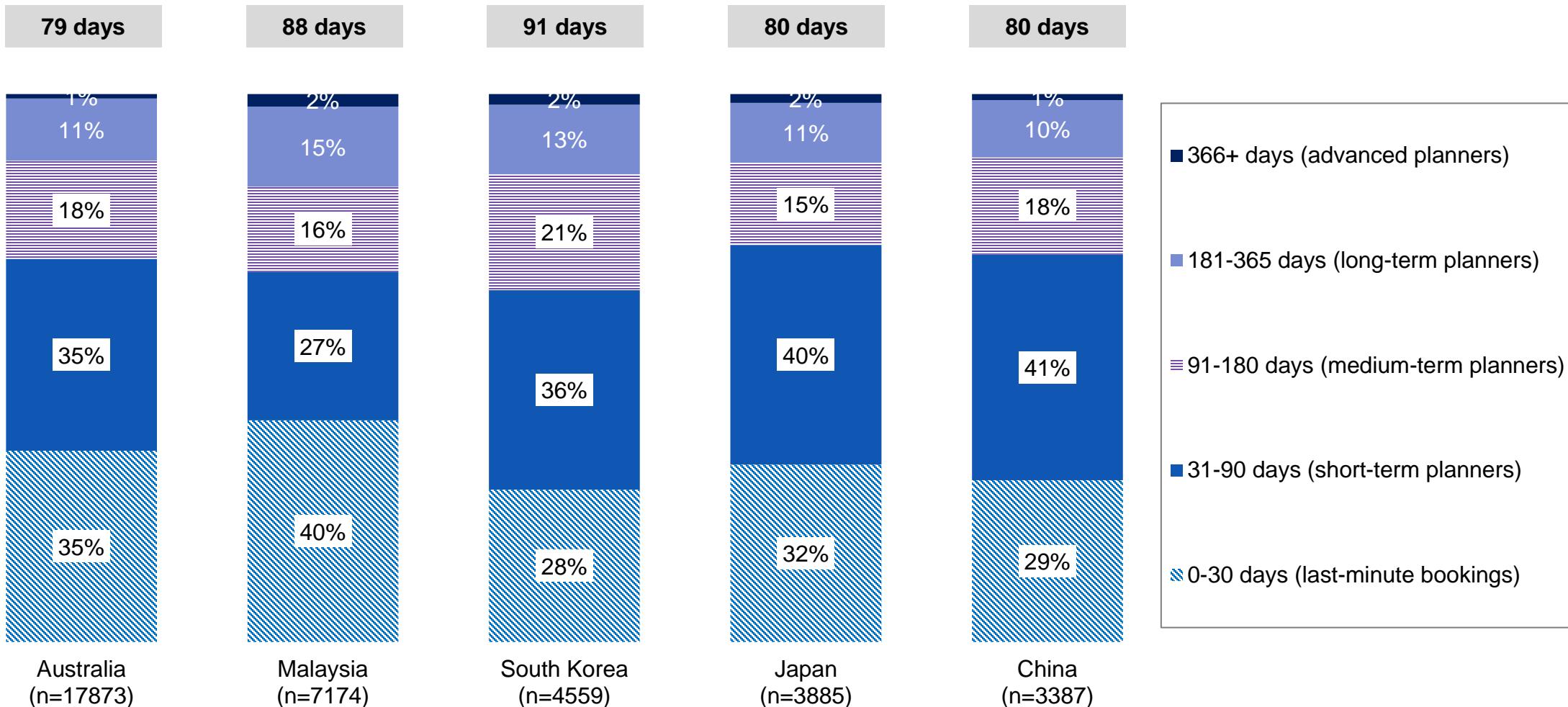
Base: All booking attempts in the dataset, including both successful and unsuccessful conversions (n=50002)

Section 1: Booking Patterns Analysis by Country

South Korea plan furthest ahead while Malaysia has the most last-minute bookings

Lead time (duration between the booking date and the date of travel) patterns by country

Mean:



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Australians mainly travel solo while Asian markets prefer pairs

Passenger size by country

Mean:

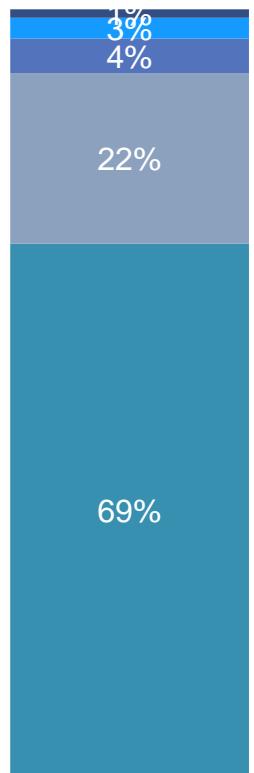
1 passenger

2 passengers

2 passengers

2 passengers

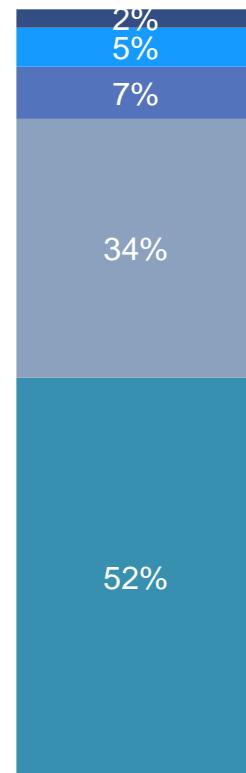
2 passengers



Australia
(n=17873)



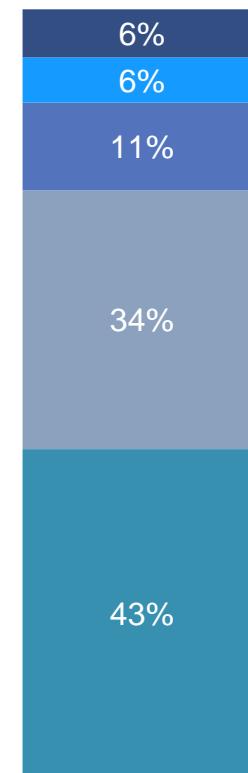
Malaysia
(n=7174)



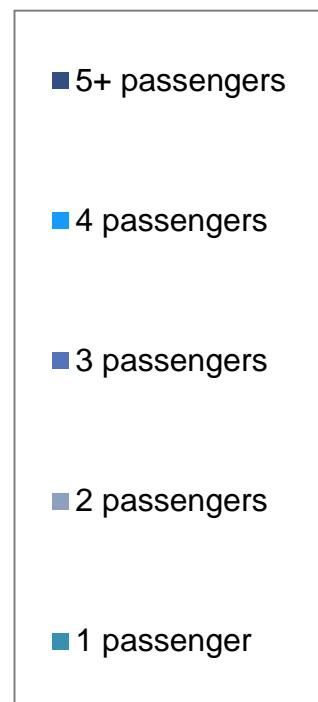
South Korea
(n=4559)



Japan
(n=3885)

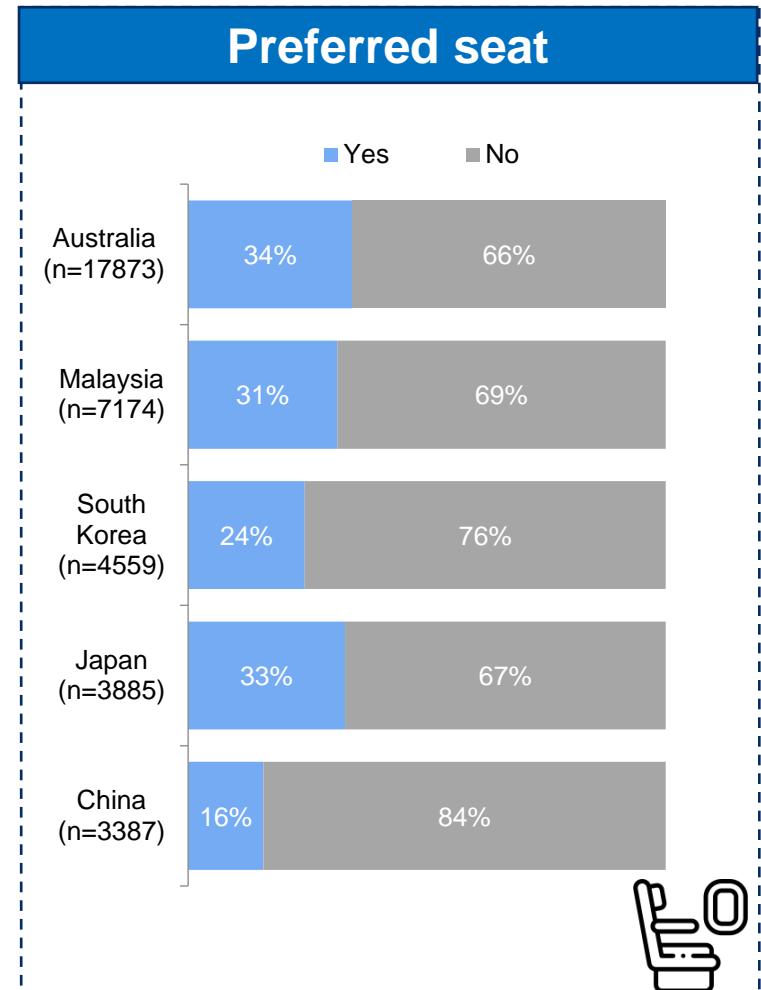
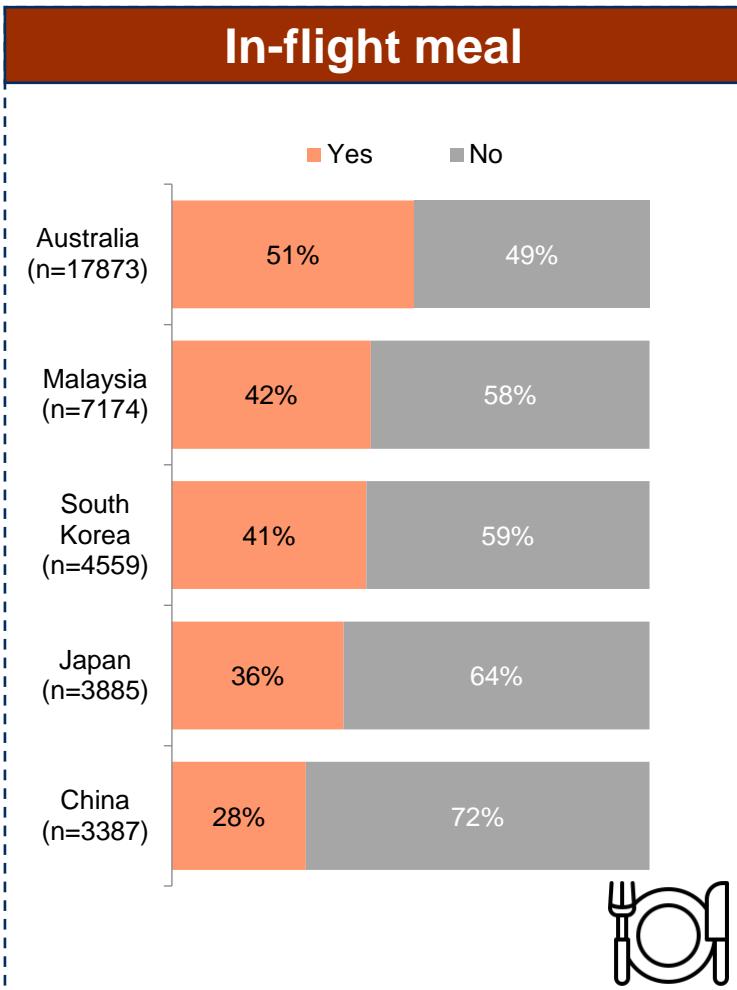
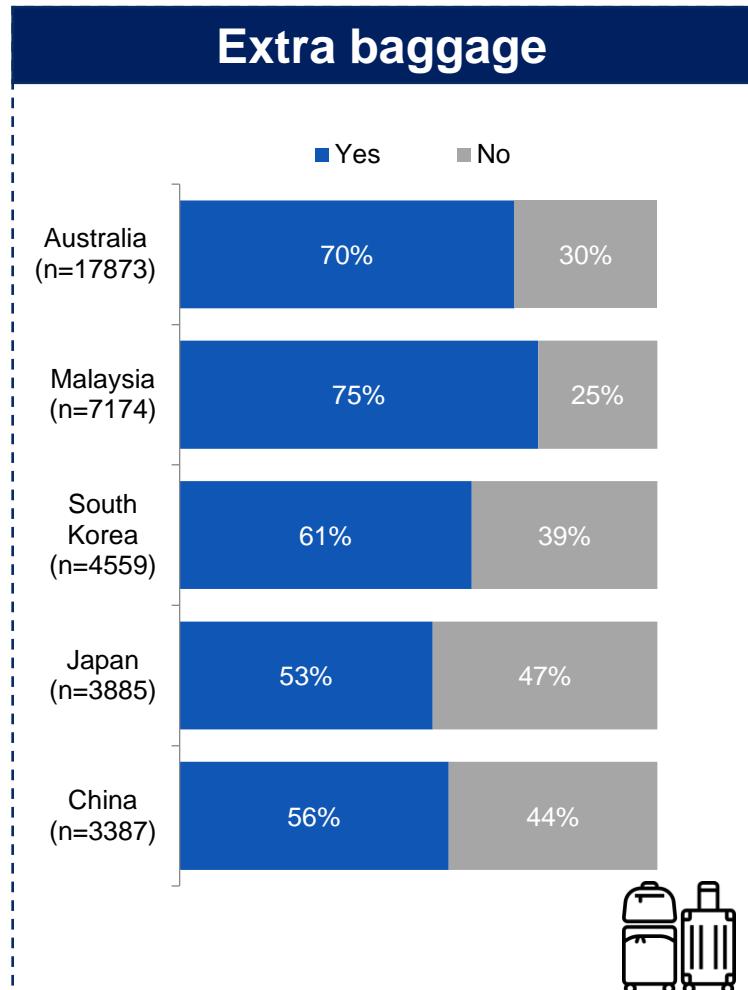


China
(n=3387)



Extra baggage service were the most preferred compared to other services across all countries

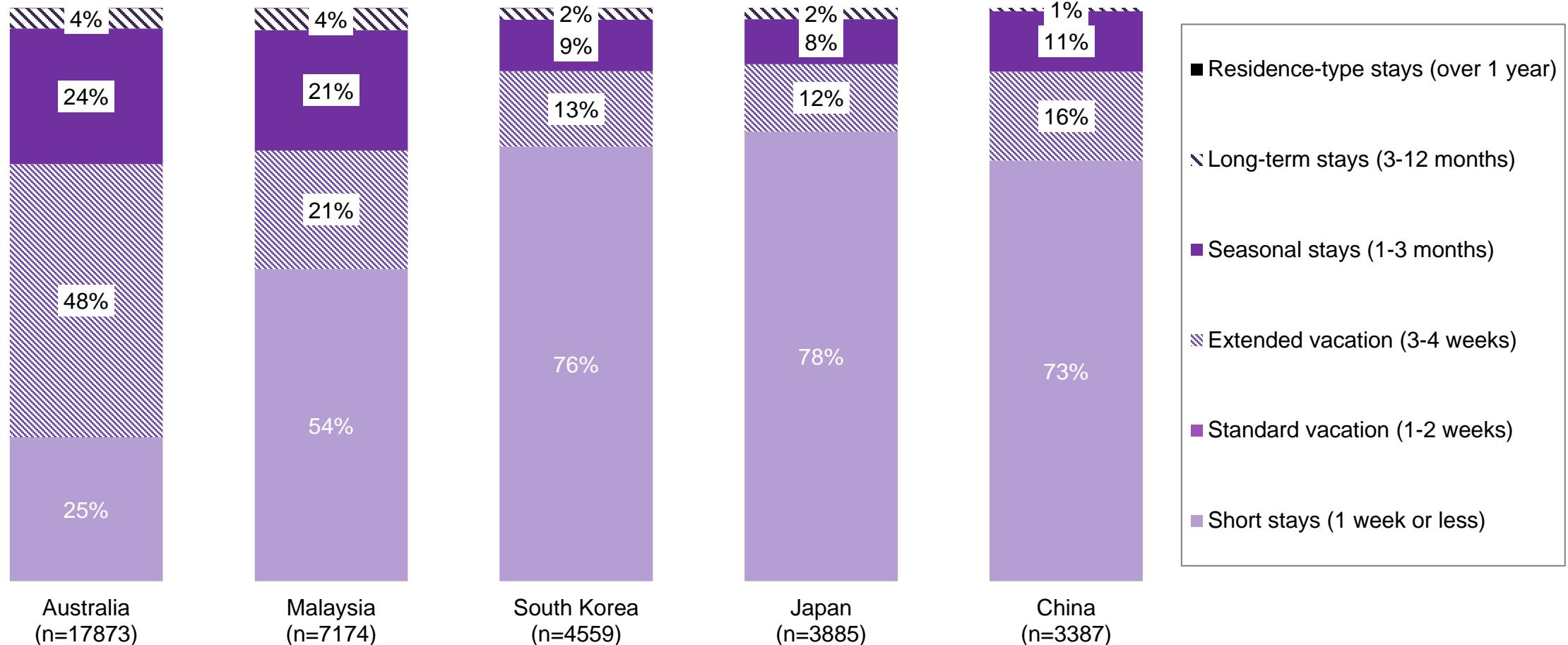
Extra service preferences by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Short stays (<1 week) dominates Asian markets while Australian prefer extended trips

Length of stay by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Morning flight preferred across all markets with slightly more preference for afternoon flight in Japan

Flight hour/day preference by country

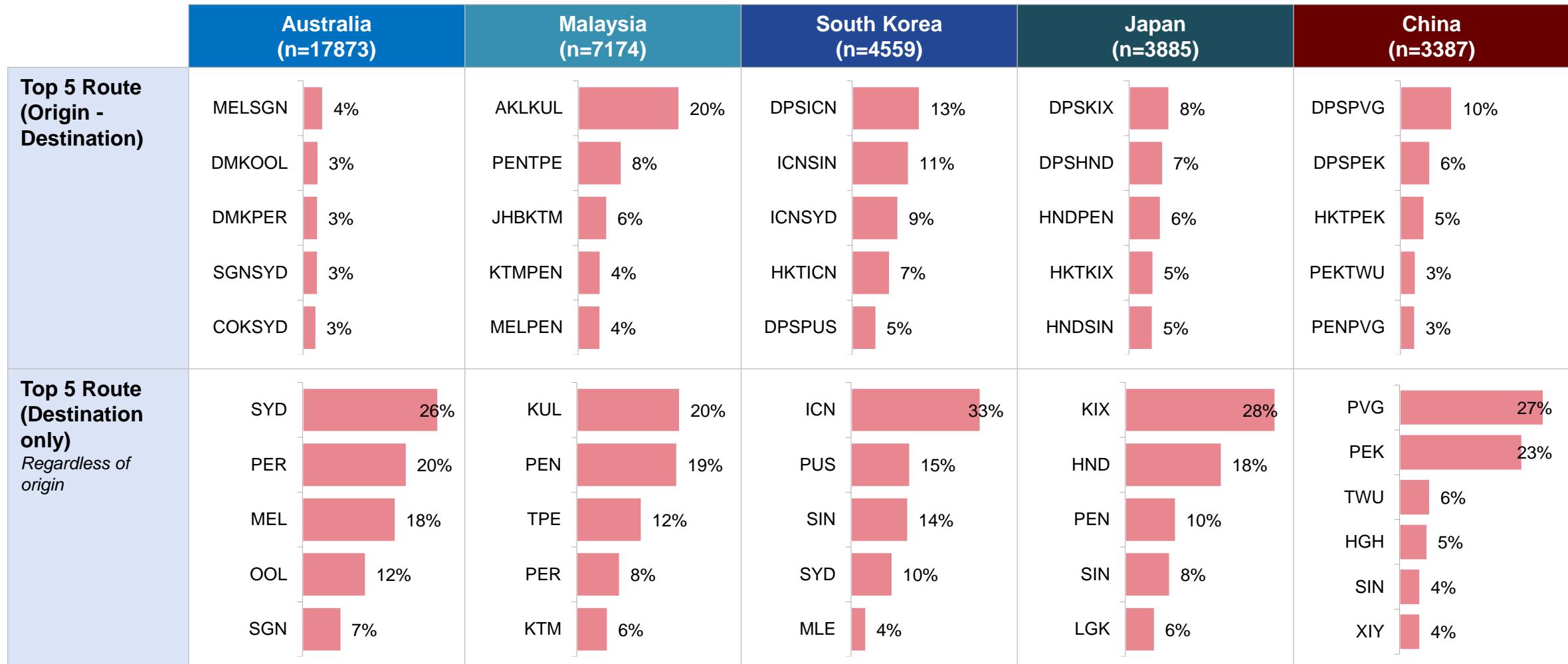
	Australia (n=17873)	Malaysia (n=7174)	South Korea (n=4559)	Japan (n=3885)	China (n=3387)
Morning (6AM - 11PM)	41%	38%	35%	30%	34%
Afternoon (12PM - 5PM)	21%	29%	32%	38%	33%
Evening (6PM - 11PM)	7%	3%	4%	6%	3%
Night (12AM - 5AM)	31%	31%	30%	26%	30%



Flight day preferences demonstrate consistency across all countries, with each day of the week attracting approximately equal booking volumes regardless of country

Each country shows strong preferences for specific destination

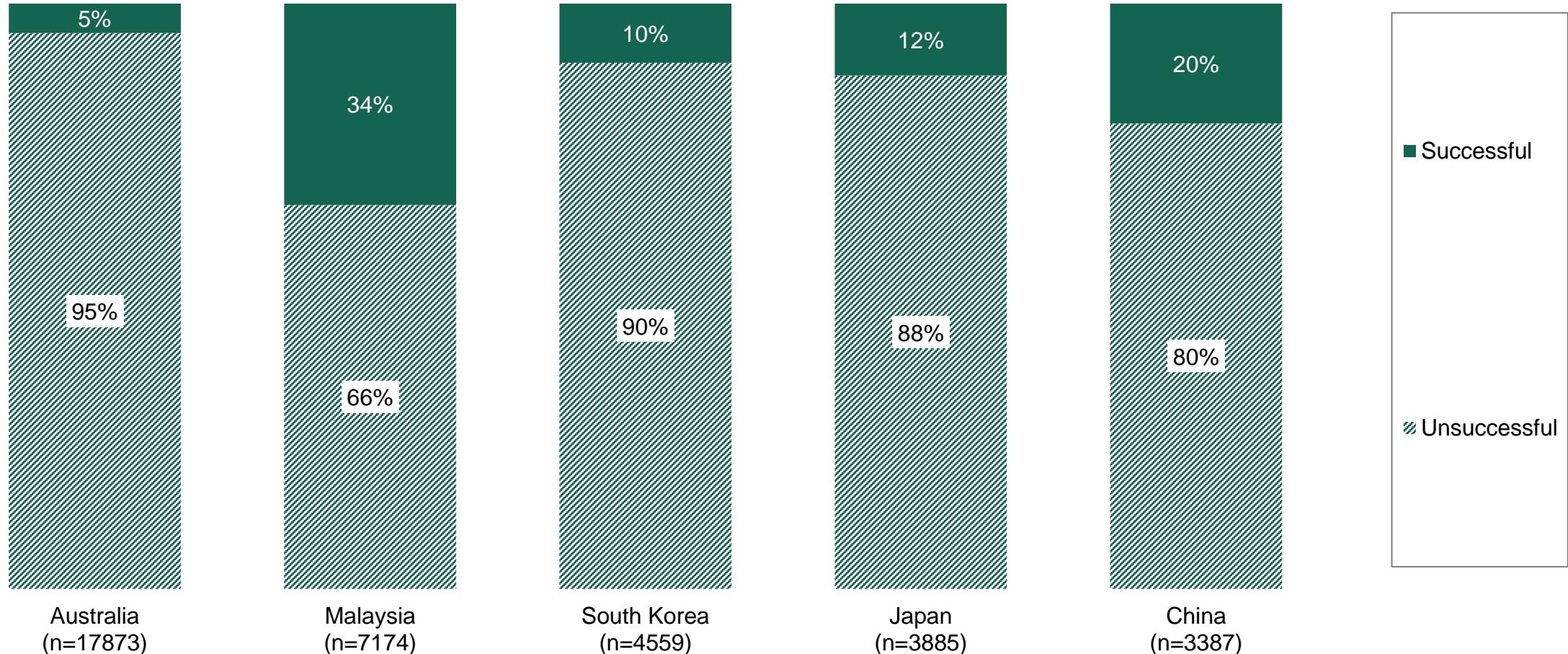
Route preferences by country



Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Malaysia secured the highest successful booking followed by China, despite smaller volume

Conversion rate (successfully booked vs not) by country

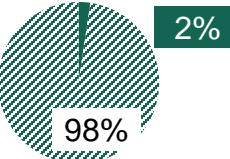
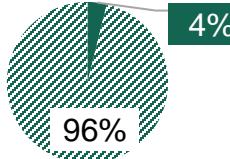
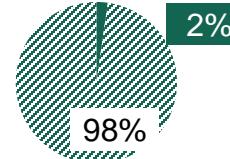
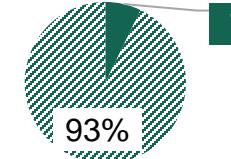
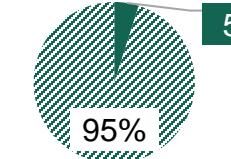


Base: All booking attempts in the dataset, including both successful and unsuccessful conversions

Section 2: Top Route Performance Analysis

Australia's primary routes all suffer from conversion rates under 7% despite representing the largest market

Australia: Top 5 route analysis

	MEL - SGN Melbourne - Vietnam (n=721)	DMK - OOL Bangkok, Thailand - Gold Coast (n=545)	DMK - PER Bangkok, Thailand - Perth (n=529)	SGN - SYD Vietnam - Sydney (n=527)	COK - SYD Kerala, India - Sydney (n=468)
Mean lead time <small>(duration between the booking date and the date of travel)</small>	87 days	72 days	62 days	93 days	83 days
Mean number of passenger	1 passenger	1 passenger	1 passenger	1 passenger	2 passengers
Most common length of stay	<div style="display: flex; justify-content: space-around;"> ≤1 week 3-4 weeks 1-3 months </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 15% 56% 26% </div>	<div style="display: flex; justify-content: space-around;"> ≤1 week 3-4 weeks 1-3 months </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 22% 54% 20% </div>	<div style="display: flex; justify-content: space-around;"> ≤1 week 3-4 weeks 1-3 months </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 46% 38% 14% </div>	<div style="display: flex; justify-content: space-around;"> ≤1 week 3-4 weeks 1-3 months </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 9% 60% 28% </div>	<div style="display: flex; justify-content: space-around;"> ≤1 week 3-4 weeks 1-3 months </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 14% 48% 33% </div>
Extra service	<div style="display: flex; align-items: center;"> ■ Extra baggage 79% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ In-flight meal 48% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ Preferred seat 29% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage 57% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ In-flight meal 43% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ Preferred seat 35% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage 46% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ In-flight meal 29% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ Preferred seat 34% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage 81% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ In-flight meal 48% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ Preferred seat 36% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage 84% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ In-flight meal 74% </div> <div style="display: flex; align-items: center; margin-top: 5px;"> ■ Preferred seat 46% </div>
Sales channel Internet : Mobile	96% : 4%	92% : 8%	88% : 13%	95% : 5%	93% : 7%
Conversion rate	 <div style="display: flex; justify-content: space-between; align-items: center;"> Successful Unsuccessful </div>	 <div style="display: flex; justify-content: space-between; align-items: center;"> Successful Unsuccessful </div>	 <div style="display: flex; justify-content: space-between; align-items: center;"> Successful Unsuccessful </div>	 <div style="display: flex; justify-content: space-between; align-items: center;"> Successful Unsuccessful </div>	 <div style="display: flex; justify-content: space-between; align-items: center;"> Successful Unsuccessful </div>

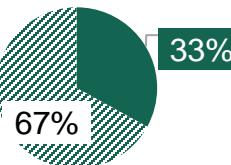
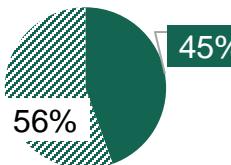
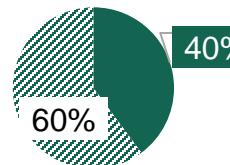
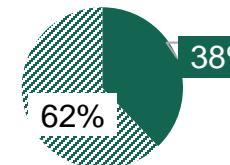
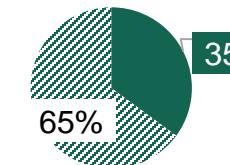
Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



Higher conversion evidenced across all Malaysia top routes with strong preferences for extra baggage service for routes with shortest lead time

Malaysia: Top 5 route analysis

Please note that M'sia stands for Malaysia

	AKL - KUL Auckland - KL, M'sia (n=1404)	PEN - TPE Penang, M'sia - Taiwan (n=600)	JHB - KTM Johor, M'sia - Nepal, India (n=399)	KTM - PEN Nepal, India - Penang, M'sia (n=309)	MEL - PEN Melbourne - Penang, M'sia (n=305)
Mean lead time <i>(duration between the booking date and the date of travel)</i>	131 days	71 days	23 days	25 days	65 days
Mean number of passenger	2 passengers	2 passengers	1 passenger	1 passenger	2 passengers
Most common length of stay	31% 43% 21% ≤1 week 3-4 weeks 1-3 months	85% 7% 7% ≤1 week 3-4 weeks 1-3 months	76% 16% 9% 3-4 weeks 1-3 months 3-12 months	73% 11% 14% 3-4 weeks 1-3 months 3-12 months	52% 22% 20% ≤1 week 3-4 weeks 1-3 months
Extra service	<ul style="list-style-type: none"> ■ Extra baggage 70% ■ In-flight meal 48% ■ Preferred seat 27% 	<ul style="list-style-type: none"> ■ Extra baggage 71% ■ In-flight meal 40% ■ Preferred seat 26% 	<ul style="list-style-type: none"> ■ Extra baggage 93% ■ In-flight meal 16% ■ Preferred seat 5% 	<ul style="list-style-type: none"> ■ Extra baggage 92% ■ In-flight meal 24% ■ Preferred seat 6% 	<ul style="list-style-type: none"> ■ Extra baggage 81% ■ In-flight meal 58% ■ Preferred seat 42%
Sales channel Internet : Mobile	90% : 10%	88% : 13%	97% : 3%	99% : 1%	86% : 14%
Conversion rate	 67% 33%	 56% 45%	 60% 40%	 62% 38%	 65% 35%

Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



South Korean routes show alarming conversion failure with three routes at 0% success rate

South Korea: Top 5 route analysis

	DPS - ICN Bali, Indonesia - Incheon, S. Korea (n=607)	ICN - SIN Incheon, S. Korea - Singapore (n=507)	ICN - SYD Incheon, S. Korea - Sydney (n=412)	HKT - ICN Phuket, Thailand - Incheon, S. Korea (n=338)	DPS - PUS Bali, Indonesia - Busan, S. Korea (n=215)
Mean lead time <i>(duration between the booking date and the date of travel)</i>	108 days	101 days	91 days	99 days	108 days
Mean number of passenger	2 passengers	2 passengers	1 passenger	2 passengers	2 passengers
Most common length of stay	<div style="display: flex; justify-content: space-around;"> <div> <p>82% ≤1 week 14% 3-4 weeks 4% 1-3 months</p> </div> <div> <p>95% ≤1 week 3-4 weeks 1-3 months</p> </div> <div> <p>59% ≤1 week 3-4 weeks 1-3 months</p> </div> <div> <p>98% ≤1 week 3-4 weeks 1-3 months</p> </div> <div> <p>75% ≤1 week 3-4 weeks 1-3 months</p> </div> </div>	<div style="display: flex; justify-content: space-around;"> <div> <p>82% ≤1 week 14% 3-4 weeks 4% 1-3 months</p> </div> <div> <p>95% ≤1 week 3-4 weeks 1-3 months</p> </div> <div> <p>59% ≤1 week 3-4 weeks 1-3 months</p> </div> <div> <p>98% ≤1 week 3-4 weeks 1-3 months</p> </div> <div> <p>75% ≤1 week 3-4 weeks 1-3 months</p> </div> </div>			
Extra service	<div style="display: flex; align-items: center;"> ■ Extra baggage: 53% </div> <div style="display: flex; align-items: center;"> ■ In-flight meal: 32% </div> <div style="display: flex; align-items: center;"> ■ Preferred seat: 21% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage: 57% </div> <div style="display: flex; align-items: center;"> ■ In-flight meal: 26% </div> <div style="display: flex; align-items: center;"> ■ Preferred seat: 14% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage: 72% </div> <div style="display: flex; align-items: center;"> ■ In-flight meal: 50% </div> <div style="display: flex; align-items: center;"> ■ Preferred seat: 36% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage: 52% </div> <div style="display: flex; align-items: center;"> ■ In-flight meal: 34% </div> <div style="display: flex; align-items: center;"> ■ Preferred seat: 20% </div>	<div style="display: flex; align-items: center;"> ■ Extra baggage: 58% </div> <div style="display: flex; align-items: center;"> ■ In-flight meal: 45% </div> <div style="display: flex; align-items: center;"> ■ Preferred seat: 26% </div>
Sales channel <i>Internet : Mobile</i>	90% : 10%	94% : 6%	90% : 10%	87% : 13%	91% : 9%
Conversion rate	<p>8% Successful 92% Unsuccessful</p>	<p>0.4% Successful 100% Unsuccessful</p>	<p>0% Successful 100% Unsuccessful</p>	<p>0% Successful 100% Unsuccessful</p>	<p>5% Successful 95% Unsuccessful</p>

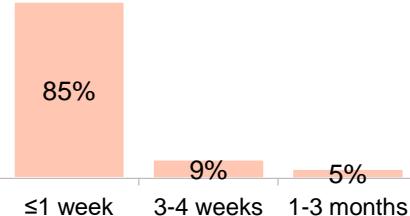
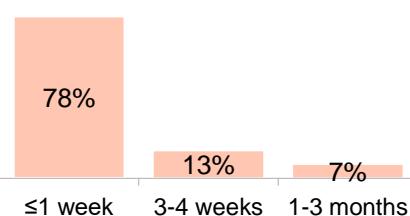
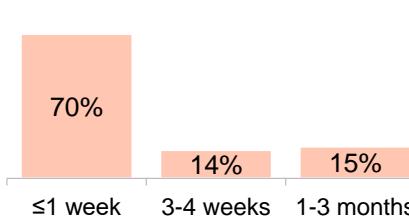
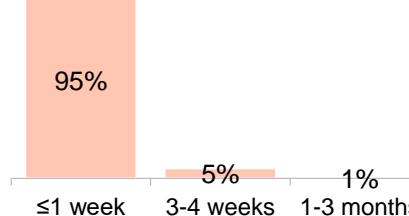
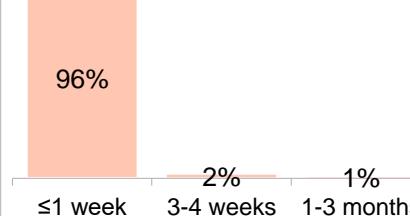
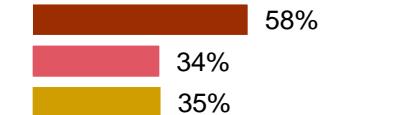
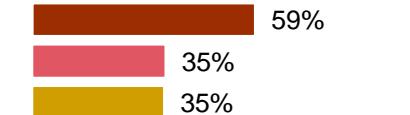
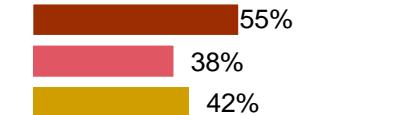
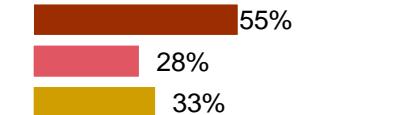
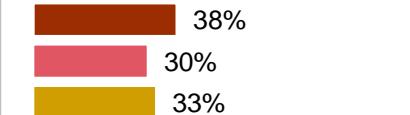
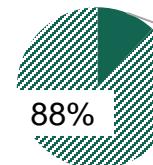
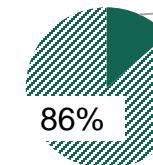
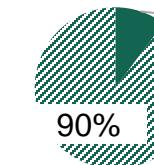
Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



Japanese routes show consistent 10-15% conversion rates with minimal variation between destinations

Japan: Top 5 route analysis

Please note that M'sia stands for Malaysia

	DPS - KIX Bali, Indonesia - Osaka, Japan (n=310)	DPS - HND Bali, Indonesia - Tokyo, Japan (n=260)	HND - PEN Tokyo, Japan - Penang, M'sia (n=243)	HKT - KIX Phuket, Thailand - Osaka, Japan (n=186)	HND - SIN Tokyo, Japan - Singapore (n=181)
Mean lead time <i>(duration between the booking date and the date of travel)</i>	95 days	96 days	84 days	83 days	70 days
Mean number of passenger	2 passengers	2 passengers	1 passenger	2 passengers	1 passenger
Most common length of stay	 85% ≤1 week 9% 3-4 weeks 5% 1-3 months	 78% ≤1 week 13% 3-4 weeks 7% 1-3 months	 70% ≤1 week 14% 3-4 weeks 15% 1-3 months	 95% ≤1 week 5% 3-4 weeks 1% 1-3 months	 96% ≤1 week 2% 3-4 weeks 1% 1-3 months
Extra service	 58% Extra baggage 34% In-flight meal 35% Preferred seat	 59% Extra baggage 35% In-flight meal 35% Preferred seat	 55% Extra baggage 38% In-flight meal 42% Preferred seat	 55% Extra baggage 28% In-flight meal 33% Preferred seat	 38% Extra baggage 30% In-flight meal 33% Preferred seat
Sales channel Internet : Mobile	79% : 21%	84% : 16%	85% : 15%	84% : 16%	85% : 16%
Conversion rate	 15% Successful 85% Unsuccessful	 12% Successful 88% Unsuccessful	 14% Successful 86% Unsuccessful	 10% Successful 90% Unsuccessful	 10% Successful 90% Unsuccessful

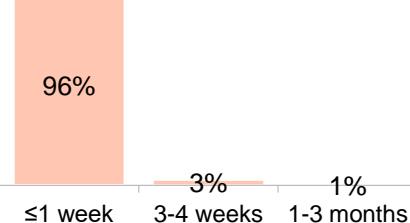
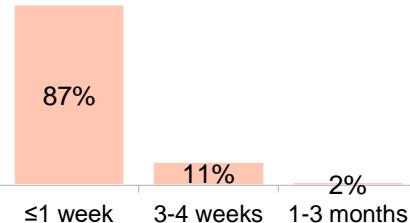
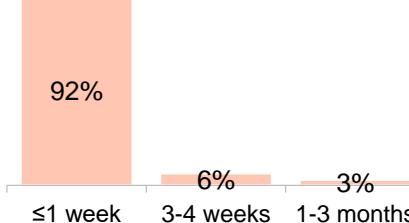
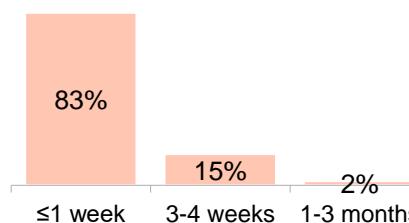
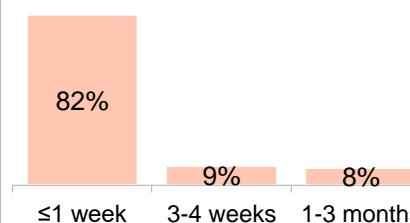
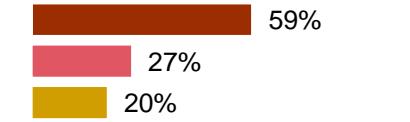
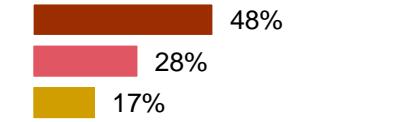
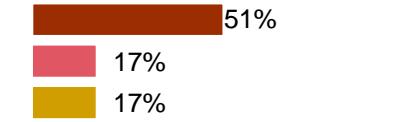
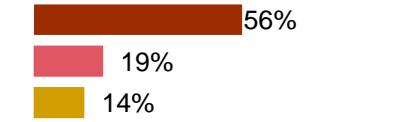
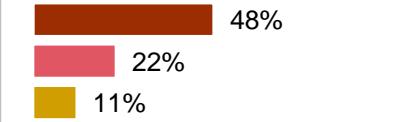
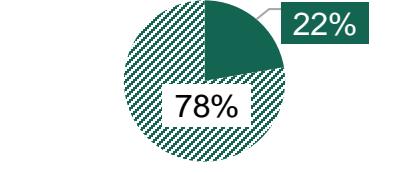
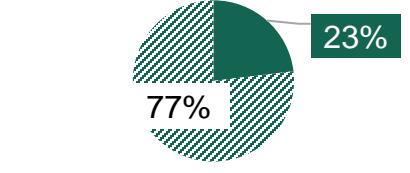
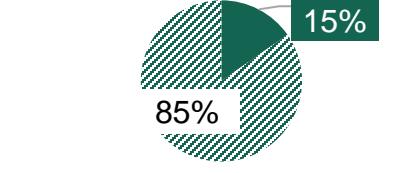
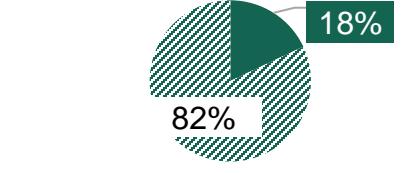
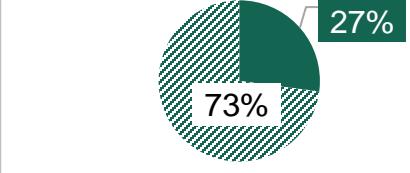
Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



China routes performed well despite their relatively lower booking volumes, with the travelers consistently preferred short stays (<1 week) across all major routes

China: Top 5 route analysis

Please note that M'sia stands for Malaysia

	DPS - PVG Bali, Indonesia - Shanghai, China (n=341)	DPS - PEK Bali, Indonesia - Beijing, China (n=195)	HKT - PEK Phuket, Thailand - Beijing, China (n=157)	PEK - TWU Beijing, China - Tawau, M'sia (n=100)	PEN - PVG Penang, M'sia - Shanghai, China (n=96)
Mean lead time <i>(duration between the booking date and the date of travel)</i>	100 days	82 days	74 days	87 days	69 days
Mean number of passenger	2 passengers	2 passengers	2 passengers	2 passengers	2 passengers
Most common length of stay	 96% ≤1 week 3% 3-4 weeks 1% 1-3 months	 87% ≤1 week 11% 3-4 weeks 2% 1-3 months	 92% ≤1 week 6% 3-4 weeks 3% 1-3 months	 83% ≤1 week 15% 3-4 weeks 2% 1-3 months	 82% ≤1 week 9% 3-4 weeks 8% 1-3 months
Extra service	 59% Extra baggage 27% In-flight meal 20% Preferred seat	 48% Extra baggage 28% In-flight meal 17% Preferred seat	 51% Extra baggage 17% In-flight meal 17% Preferred seat	 56% Extra baggage 19% In-flight meal 14% Preferred seat	 48% Extra baggage 22% In-flight meal 11% Preferred seat
Sales channel Internet : Mobile	74% : 26%	86% : 14%	80% : 20%	82% : 18%	77% : 23%
Conversion rate	 22% Successful 78% Unsuccessful	 23% Successful 77% Unsuccessful	 15% Successful 85% Unsuccessful	 18% Successful 82% Unsuccessful	 27% Successful 73% Unsuccessful

Base: All booking attempts in the dataset, including both successful and unsuccessful conversions



THANK YOU